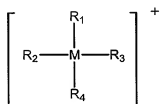


ABSTRACT

The present invention relates to processes for preparing a nanocomposite comprising:

- a. preparing an organoclay material by reacting a swellable layered clay with an onium ion represented by Formula (I):



wherein

- i) M is nitrogen or phosphorus,
 - ii) R₁ is a straight or branched alkyl group having at least 8 carbon atoms,
 - iii) R₂, R₃, and R₄ are independently selected from organic or oligomeric ligands or hydrogen, and
 - iv) at least one of R₂, R₃, and R₄ comprises an alkylene oxide group having from 2 to 6 carbon atoms or a polyalkylene oxide group, and
- b. melt mixing the organoclay material with an expanding agent, and
- c. melt extruding the expanded organoclay and a polymer to provide a nanocomposite.